

PATENT COOPERATION TREATY

PCT

NOTIFICATION OF THE RECORDING
OF A CHANGE(PCT Rule 92bis.1 and
Administrative Instructions, Section 422)

From the INTERNATIONAL BUREAU

To:

PELLMANN, Hans-Bernd
Tiedtke-Bühling-Kinne et al.
Bavariaring 4
D-80336 München
ALLEMAGNE

Date of mailing (day/month/year) 17 January 2002 (17.01.02)	IMPORTANT NOTIFICATION
Applicant's or agent's file reference WO 24040	
International application No. PCT/EP99/06176	International filing date (day/month/year) 23 August 1999 (23.08.99)

1. The following indications appeared on record concerning:

☒ the applicant ☐ the inventor ☐ the agent ☐ the common representative

Name and Address

NOKIA NETWORKS OY
Keilalahdentie 4
FIN-02150 Espoo
Finland

State of Nationality

FI

State of Residence

FI

Telephone No.

+358 9 1807 0

Facsimile No.

+358 9 1807 496

Teleprinter No.

2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:

☐ the person ☒ the name ☐ the address ☐ the nationality ☐ the residence

Name and Address

NOKIA CORPORATION
Keilalahdentie 4
FIN-02150 Espoo
Finland

State of Nationality

FI

State of Residence

FI

Telephone No.

+358 9 1807 0

Facsimile No.

+358 9 1807 496

Teleprinter No.

3. Further observations, if necessary:

Change of applicant's name (merger) has been recorded.

4. A copy of this notification has been sent to:

<input checked="" type="checkbox"/> the receiving Office	<input type="checkbox"/> the designated Offices concerned
<input type="checkbox"/> the International Searching Authority	<input checked="" type="checkbox"/> the elected Offices concerned
<input type="checkbox"/> the International Preliminary Examining Authority	<input type="checkbox"/> other:

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Facsimile No.: (41-22) 740.14.35

Authorized officer

S. Buttay

Telephone No.: (41-22) 338.83.38

PATENT COOPERATION TREATY

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Commissioner
US Department of Commerce
United States Patent and Trademark
Office, PCT
2011 South Clark Place Room
CP2/5C24
Arlington, VA 22202
ETATS-UNIS D'AMERIQUE
in its capacity as elected Office

Date of mailing (day/month/year) 07 June 2001 (07.06.01)	
International application No. PCT/EP99/06176	Applicant's or agent's file reference WO 24040
International filing date (day/month/year) 23 August 1999 (23.08.99)	Priority date (day/month/year)
Applicant ANDERSEN, Michael, Tulinius	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:

22 March 2001 (22.03.01)

☐ in a notice effecting later election filed with the International Bureau on:2. The election ☒ was☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer Olivia TEFY Telephone No.: (41-22) 338.83.38
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PATENT COOPERATION TREATY

PCT

From the INTERNATIONAL BUREAU

NOTIFICATION OF RECEIPT OF
RECORD COPY

(PCT Rule 24.2(a))

EINGEGANGEN
Patentanwalts

- 2. NOV. 1999

TIEDTKE-BÜHLING-KINNE
ALLEMAGNE

To:

PELLMANN, Hans-Bernd
Tiedtke-Bühling-Kinne et al.Bavariaring 4
D-80336 München
ALLEMAGNE

Date of mailing (day/month/year) 26 October 1999 (26.10.99)	IMPORTANT NOTIFICATION
Applicant's or agent's file reference WO 24040	International application No. PCT/EP99/06176

The applicant is hereby notified that the International Bureau has received the record copy of the international application as detailed below.

Name(s) of the applicant(s) and State(s) for which they are applicants:

NOKIA TELECOMMUNICATIONS OY (for all designated States except US)

ANDERSEN, Michael, Tulinius (for US)

International filing date : 23 August 1999 (23.08.99)

Priority date(s) claimed :

Date of receipt of the record copy
by the International Bureau :

15 October 1999 (15.10.99)

List of designated Offices :

AP : GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW

EA : AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

EP : AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

OA : BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

National : AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE,
GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX,
NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW

ATTENTION

The applicant should carefully check the data appearing in this Notification. In case of any discrepancy between these data and the indications in the international application, the applicant should immediately inform the International Bureau.

In addition, the applicant's attention is drawn to the information contained in the Annex, relating to:

- ☒ time limits for entry into the national phase
- ☒ confirmation of precautionary designations
- ☐ requirements regarding priority documents

A copy of this Notification is being sent to the receiving Office and to the International Searching Authority.

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. (41-22) 740.14.35	Authorized officer: R. Chrem Telephone No. (41-22) 338.83.38
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INFORMATION ON TIME LIMITS FOR ENTERING THE NATIONAL PHASE

The applicant is reminded that the "national phase" must be entered before each of the designated Offices indicated in the Notification of Receipt of Record Copy (Form PCT/IB/301) by paying national fees and furnishing translations, as prescribed by the applicable national laws.

The time limit for performing these procedural acts is **20 MONTHS** from the priority date or, for those designated States which the applicant elects in a demand for international preliminary examination or in a later election, **30 MONTHS** from the priority date, provided that the election is made before the expiration of 19 months from the priority date. Some designated (or elected) Offices have fixed time limits which expire even later than 20 or 30 months from the priority date. In other Offices an extension of time or grace period, in some cases upon payment of an additional fee, is available.

In addition to these procedural acts, the applicant may also have to comply with other special requirements applicable in certain Offices. **It is the applicant's responsibility** to ensure that the necessary steps to enter the national phase are taken in a timely fashion. Most designated Offices do not issue reminders to applicants in connection with the entry into the national phase.

For detailed information about the procedural acts to be performed to enter the national phase before each designated Office, the applicable time limits and possible extensions of time or grace periods, and any other requirements, see the relevant Chapters of Volume II of the PCT Applicant's Guide. Information about the requirements for filing a demand for international preliminary examination is set out in Chapter IX of Volume I of the PCT Applicant's Guide.

GR and ES became bound by PCT Chapter II on 7 September 1996 and 6 September 1997, respectively, and may, therefore, be elected in a demand or a later election filed on or after 7 September 1996 and 6 September 1997, respectively, regardless of the filing date of the international application. (See second paragraph above.)

Note that only an applicant who is a national or resident of a PCT Contracting State which is bound by Chapter II has the right to file a demand for international preliminary examination.

CONFIRMATION OF PRECAUTIONARY DESIGNATIONS

This notification lists only specific designations made under Rule 4.9(a) in the request. It is important to check that these designations are correct. Errors in designations can be corrected where precautionary designations have been made under Rule 4.9(b). The applicant is hereby reminded that any precautionary designations may be confirmed according to Rule 4.9(c) before the expiration of 15 months from the priority date. If it is not confirmed, it will automatically be regarded as withdrawn by the applicant. There will be no reminder and no invitation. Confirmation of a designation consists of the filing of a notice specifying the designated State concerned (with an indication of the kind of protection or treatment desired) and the payment of the designation and confirmation fees. Confirmation must reach the receiving Office within the 15-month time limit.

REQUIREMENTS REGARDING PRIORITY DOCUMENTS

For applicants who have not yet complied with the requirements regarding priority documents, the following is recalled.

Where the priority of an earlier national, regional or international application is claimed, the applicant must submit a copy of the said earlier application, certified by the authority with which it was filed ("the priority document") to the receiving Office (which will transmit it to the International Bureau) or directly to the International Bureau, before the expiration of 16 months from the priority date, provided that any such priority document may still be submitted to the International Bureau before that date of international publication of the international application, in which case that document will be considered to have been received by the International Bureau on the last day of the 16-month time limit (Rule 17.1(a)).

Where the priority document is issued by the receiving Office, the applicant may, instead of submitting the priority document, request the receiving Office to prepare and transmit the priority document to the International Bureau. Such request must be made before the expiration of the 16-month time limit and may be subjected by the receiving Office to the payment of a fee (Rule 17.1(b)).

If the priority document concerned is not submitted to the International Bureau or if the request to the receiving Office to prepare and transmit the priority document has not been made (and the corresponding fee, if any, paid) within the applicable time limit indicated under the preceding paragraphs, any designated State may disregard the priority claim, provided that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity to furnish the priority document within a time limit which is reasonable under the circumstances.

Where several priorities are claimed, the priority date to be considered for the purposes of computing the 16-month time limit is the filing date of the earliest application whose priority is claimed.

PATENT COOPERATION TREATY

WO 01/15462
PCT/EP99/06176

PCT

NOTICE INFORMING THE APPLICANT OF THE COMMUNICATION OF THE INTERNATIONAL APPLICATION TO THE DESIGNATED OFFICES

(PCT Rule 47.1(c), first sentence)

From the INTERNATIONAL BUREAU

To:

PELLMANN, Hans-Bernd
Tiedtke-Bühling-Kinne et al.
Bavariaring 4
D-80336 München
ALLEMAGNE

GEHANGEN
Patentanwälte
- 9. März 2001
TIEDTKE - BÜHLING - KINNE
& PARTNER (GbR)

Date of mailing (day/month/year) 01 March 2001 (01.03.01)		
Applicant's or agent's file reference WO 24040		IMPORTANT NOTICE
International application No. PCT/EP99/06176	International filing date (day/month/year) 23 August 1999 (23.08.99)	Priority date (day/month/year)
Applicant NOKIA NETWORKS OY et al		

1. Notice is hereby given that the International Bureau has communicated, as provided in Article 20, the international application to the following designated Offices on the date indicated above as the date of mailing of this Notice:
AU, KP, KR, US

In accordance with Rule 47.1(c), third sentence, those Offices will accept the present Notice as conclusive evidence that the communication of the international application has duly taken place on the date of mailing indicated above and no copy of the international application is required to be furnished by the applicant to the designated Office(s).

2. The following designated Offices have waived the requirement for such a communication at this time:
AE, AL, AM, AP, AT, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EA, EE, EP, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, OA, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW
The communication will be made to those Offices only upon their request. Furthermore, those Offices do not require the applicant to furnish a copy of the international application (Rule 49.1(a-bis)).

3. Enclosed with this Notice is a copy of the international application as published by the International Bureau on
01 March 2001 (01.03.01) under No. WO 01/15462

REMINDER REGARDING CHAPTER II (Article 31(2)(a) and Rule 54.2)

If the applicant wishes to postpone entry into the national phase until 30 months (or later in some Offices) from the priority date, a demand for international preliminary examination must be filed with the competent International Preliminary Examining Authority before the expiration of 19 months from the priority date.

It is the applicant's sole responsibility to monitor the 19-month time limit.

Note that only an applicant who is a national or resident of a PCT Contracting State which is bound by Chapter II has the right to file a demand for international preliminary examination.

REMINDER REGARDING ENTRY INTO THE NATIONAL PHASE (Article 22 or 39(1))

If the applicant wishes to proceed with the international application in the national phase, he must, within 20 months or 30 months, or later in some Offices, perform the acts referred to therein before each designated or elected Office.

For further important information on the time limits and acts to be performed for entering the national phase, see the Annex to Form PCT/IB/301 (Notification of Receipt of Record Copy) and Volume II of the PCT Applicant's Guide.

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. (41-22) 740.14.35	Authorized officer: J. Zahra Telephone No. (41-22) 338.83.38
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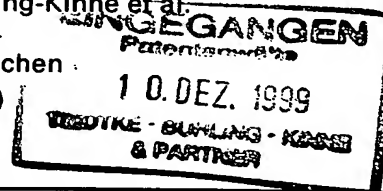
PATENT COOPERATION TREATY

PCT

From the INTERNATIONAL BUREAU

NOTIFICATION OF THE RECORDING
OF A CHANGE(PCT Rule 92bis.1 and
Administrative Instructions, Section 422)

To:

PELLMANN, Hans-Bernd
Tiedtke-Bühling-Kinne et al.
Bavariaring 4
D-80336 München
ALLEMAGNE

Date of mailing (day/month/year) 06 December 1999 (06.12.99)	IMPORTANT NOTIFICATION
Applicant's or agent's file reference WO 24040	
International application No. PCT/EP99/06176	International filing date (day/month/year) 23 August 1999 (23.08.99)

1. The following indications appeared on record concerning:

☒ the applicant ☐ the inventor ☐ the agent ☐ the common representative

Name and Address

NOKIA TELECOMMUNICATIONS OY
Keilalahdentie 4
FIN-02150 Espoo
Finland

State of Nationality

FI

State of Residence

FI

Telephone No.

+358 9 1807 0

Facsimile No.

+358 9 1807 496

Teleprinter No.

2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:

☐ the person ☒ the name ☐ the address ☐ the nationality ☐ the residence

Name and Address

NOKIA NETWORKS OY
Keilalahdentie 4
FIN-02150 Espoo
Finland

State of Nationality

FI

State of Residence

FI

Telephone No.

+358 9 1807 0

Facsimile No.

+358 9 1807 496

Teleprinter No.

3. Further observations, if necessary:

4. A copy of this notification has been sent to:

<input checked="" type="checkbox"/> the receiving Office	<input type="checkbox"/> the designated Offices concerned
<input checked="" type="checkbox"/> the International Searching Authority	<input type="checkbox"/> the elected Offices concerned
<input type="checkbox"/> the International Preliminary Examining Authority	<input type="checkbox"/> other:

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Authorized officer

Beate Giffo-Schmitt

Facsimile No.: (41-22) 740.14.35

Telephone No.: (41-22) 336.83.38

EINGEGANGEN
 Patentanwälte
 15. Juni 2001
 TIEDTKE · BÜHLING · KINNE
 & PARTNER (GmbH)

PATENT COOPERATION TREATY

From the INTERNATIONAL BUREAU

To:

PELLMANN, Hans-Bernd
 Tiedtke-Bühling-Kinne et al.
 Bavariaring 4
 D-80336 München
 ALLEMAGNE

INFORMATION CONCERNING ELECTED OFFICES NOTIFIED OF THEIR ELECTION

(PCT Rule 61.3)

Date of mailing (day/month/year) 07 June 2001 (07.06.01)		
Applicant's or agent's file reference WO 24040		IMPORTANT INFORMATION
International application No. PCT/EP99/06176	International filing date (day/month/year) 23 August 1999 (23.08.99)	
Applicant NOKIA NETWORKS OY et al		

- The applicant is hereby informed that the International Bureau has, according to Article 31(7), notified each of the following Offices of its election:
 EP : AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
 National : AU, BG, CA, CN, CZ, DE, IL, JP, KR, MN, NO, NZ, PL, RO, RU, SE, SK, US
 - The following Offices have waived the requirement for the notification of their election; the notification will be sent to them by the International Bureau only upon their request:
 AP : GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW
 EA : AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
 OA : BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
 National : AE, AL, AM, AT, AZ, BA, BB, BR, BY, CH, CU, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IN, IS, KE, KG, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MW, MX, PT, SD, SG, SI, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW
 - The applicant is reminded that he must enter the "national phase" before the expiration of 30 months from the priority date before each of the Offices listed above. This must be done by paying the national fee(s) and furnishing, if prescribed, a translation of the international application (Article 39(1)(a)), as well as, where applicable, by furnishing a translation of any annexes of the international preliminary examination report (Article 36(3)(b) and Rule 74.1).
- Some offices have fixed time limits expiring later than the above-mentioned time limit. For detailed information about the applicable time limits and the acts to be performed upon entry into the national phase before a particular Office, see Volume II of the PCT Applicant's Guide.
- The entry into the European regional phase is postponed until 31 months from the priority date for all States designated for the purposes of obtaining a European patent.

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. (41-22) 740.14.35	Authorized officer: Olivia TEFY Telephone No. (41-22) 338.83.38
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PATENT COOPERATION TREATY

RECEIVED
EINGEGANGEN

- 6. Juli 2001

TBK - PATENT

From the:
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

LESON, T.J.A.
TIEDTKE-BÜHLING-KINNE & PARTNER
TBK-Patent
Bavariaring 4
D-80336 München
ALLEMAGNE

PCT

WRITTEN OPINION

(PCT Rule 66)

Date of mailing
(day/month/year) 05.07.2001

Applicant's or agent's file reference
WO 24040

REPLY DUE within 3 month(s)
from the above date of mailing

International application No.
PCT/EP99/06176

International filing date (day/month/year)
23/08/1999

Priority date (day/month/year)
23/08/1999

International Patent Classification (IPC) or both national classification and IPC
H04Q3/00

Applicant
NOKIA NETWORKS OY et al.

1. This written opinion is the **first** drawn up by this International Preliminary Examining Authority.

2. This opinion contains indications relating to the following items:

- I ☒ Basis of the opinion
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain document cited
- VII ☒ Certain defects in the international application
- VIII ☐ Certain observations on the international application

3. The applicant is hereby **invited to reply** to this opinion.

When? See the time limit indicated above. The applicant may, before the expiration of that time limit, request this Authority to grant an extension, see Rule 66.2(d).

How? By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

Also: For an additional opportunity to submit amendments, see Rule 66.4.
For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4 bis.
For an informal communication with the examiner, see Rule 66.6.

If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.

4. The final date by which the international preliminary examination report must be established according to Rule 69.2 is: 23/12/2001.

File

Term

5.10.01

not extendable

Name and mailing address of the international preliminary examining authority:



European Patent Office
D-80298 Munich
Tel. +49 89 2399 - 0 Tx: 523656 epmu d
Fax: +49 89 2399 - 4465

Authorized officer / Examiner

Hodgins, W

Formalities officer (incl. extension of time limits)

Finnie, A

Telephone No. +49 89 2399 8251



I. Basis of the opinion

1. With regard to the **elements** of the international application (Replacement *sheets which have been furnished to the receiving Office in response to an invitation under Article 14* are referred to in this opinion as "*originally filed*");

Description, pages:

1-10 as originally filed

Claims, No.:

1-12 as originally filed

Drawings, sheets:

1/2,2/2 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:

☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N) Claims 1,2,4-8,10-12

Inventive step (IS) Claims 3,9

Industrial applicability (IA) Claims

2. Citations and explanations
see separate sheet

VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:
see separate sheet

Concerning Point V

- 1) The following documents are cited:

D1: EP-A-0 944 203 (NOKIA MOBILE PHONES LTD) 22 September 1999 (1999-09-22) & FI 980 291 A (NOKIA MOBILE PHONES LTD) 10 August 1999 (1999-08-10)
D2: WO 97 31306 A (NOKIA MOBILE PHONES LTD) 28 August 1997 (1997-08-28)
D3: EP-A-0 851 696 (AT&T WIRELESS SERVICES, INC.) 1 July 1998 (1998-07-01)
D4: US-A-5 577 103 (FOTI) 19 November 1996 (1996-11-19)

It is noted that applicant's own D1 doesn't as such form prior art within the meaning of 64.1 PCT. However, family member FI-A-908 291 does. Since Finnish is not a working language of this examining authority (and said Finnish document isn't quickly available at this examining authority), passages will be cited from D1, on the assumption that this document comprises the same content as the Finnish document and is an accurate translation of said document. Accordingly, no entry is made under Point VI (certain published document).

- 2) A services management method as per independent claim 1 is completely known and thus not novel over both of the applicant's own D1 (see in particular abstract, but also the other passages cited in search report) and D2 (see in particular figures 1 or 2 and the related parts of the description)!!

Claim 1 thus fails to meet the requirements of Articles 33(1) and (2) PCT.

- 3) Similar comments to the above apply to independent apparatus claim 7, which corresponds to method claim 1.

Independent claim 12 relates to a subscriber terminal essentially adapted to work with the device of claim 7. This is also known from figures 1 and 2 of D2.

These claims are thus also not novel over D1 or D2 and thus also fail to meet the requirements of Articles 33(1) and (2) PCT.

- 4) That the access code is a password (claims 2 and 8) is known from D2 (page 1 lines 3 - 5).

Use of "a subscriber identification number" (claims 3 and 9) is obvious in the light of the prior art citations.

Use of SMS or USSD (claims 4, 5, 10 and 11) is known from D1 (paragraph 0021).

Detecting the access code in a terminal (claim 6) corresponds to apparatus claim 12 and is known from D2.

None of these claims thus meets the requirements of Article 33(1) PCT with respect to novelty or inventive step as indicated on the attached cover sheet.

- 5) It is not at present apparent which part of the application could serve as a basis for a new, allowable claim. Should the applicant nevertheless regard some particular matter as patentable an independent claim including such matter should be filed.

The applicant should also indicate in the letter of reply the difference of the subject-matter of the new claim vis-à-vis the state of the art (in particular D1 and D2 and their combination) and the significance thereof.

Concerning Point VII

- 1) The independent claims should be put in the two part form recommended by Rule 6.3(b) PCT with a pre-characterising part reflecting the teachings of the closest prior art (eg D1 or D2).

If, however, the applicant is of the opinion that the two-part form would be inappropriate, then reasons therefor should be provided in the letter of reply. In addition, the applicant should ensure that it is clear from the description which features of the subject-matter of the independent claims are known from the prior art (cf. the PCT Guidelines PCT/GL/3 III 2.3a).

**WRITTEN OPINION
SEPARATE SHEET**

International application No. PCT/EP99/06176

- 2) In order to meet the requirements of Rule 5.1(a)(ii) PCT, at least the documents D1 and D2 should be cited in the description and briefly discussed.
- 3) If necessary, the description should be brought into conformance with any newly filed claims (Rule 5.1(a)(iii) PCT).
- 4) Article 34(2)(b) PCT must be observed when amending.



PATENT COOPERATION TREATY

PCT

RECEIVED
L'INGEGNERIA
26. Okt. 2001
TBK - PATENT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference WO 24040	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP99/06176	International filing date (day/month/year) 23/08/1999	Priority date (day/month/year) 23/08/1999
International Patent Classification (IPC) or national classification and IPC H04Q3/00		
Applicant NOKIA NETWORKS OY et al.		
<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 6 sheets, including this cover sheet.</p> <p><input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of 3 sheets.</p>		
<p>3. This report contains indications relating to the following items:</p> <ul style="list-style-type: none">I <input checked="" type="checkbox"/> Basis of the reportII <input type="checkbox"/> PriorityIII <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicabilityIV <input type="checkbox"/> Lack of unity of inventionV <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statementVI <input type="checkbox"/> Certain documents citedVII <input checked="" type="checkbox"/> Certain defects in the international applicationVIII <input type="checkbox"/> Certain observations on the international application		
Date of submission of the demand 22/03/2001	Date of completion of this report 25.10.2001	
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer Hodgins, W Telephone No. +49 89 2399 8987 	

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/EP99/06176

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, pages:

1-10 as originally filed

Claims, No.:

1-12 as received on 05/10/2001 with letter of 05/10/2001

Drawings, sheets:

1/2,2/2 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/EP99/06176

☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims 1-12
	No: Claims
Inventive step (IS)	Yes: Claims
	No: Claims 1-12
Industrial applicability (IA)	Yes: Claims 1-12
	No: Claims

2. Citations and explanations
see separate sheet

VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:
see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/EP99/06176

Concerning Point V

- 1) The following documents are cited:

D1: EP-A-0 944 203 (NOKIA MOBILE PHONES LTD) 22 September 1999 (1999-09-22) & FI 980 291 A (NOKIA MOBILE PHONES LTD) 10 August 1999 (1999-08-10)
D2: WO 97 31306 A (NOKIA MOBILE PHONES LTD) 28 August 1997 (1997-08-28)
D3: EP-A-0 851 696 (AT&T WIRELESS SERVICES, INC.) 1 July 1998 (1998-07-01)
D4: US-A-5 577 103 (FOTI) 19 November 1996 (1996-11-19)

It is noted that applicant's own D1 doesn't as such form prior art within the meaning of Rule 64.1 PCT. However, family member **FI-A-908 291** was published on **10 August 1999**. Since the current application's filing date is **23 August 1999** (ie after 10th August) and no priority is claimed, family member FI-A-908 291 **does** form prior art within the meaning of Rule 64.1 PCT. Since Finnish is not a working language of this examining authority, passages will be cited from D1, on the assumption that this document comprises the same content as the Finnish document and is an accurate translation of said document. Accordingly, no entry is made under Point VI (certain published documents).

- 2) Claim 1 is industrially applicable within the meaning of Articles 33(1) and (4) PCT.

Claim 1 claims "a services management method for managing subscriber services in an Intelligent Network". Since an Intelligent Network is not known from any of the above citations, claim 1 is also novel within the meaning of Articles 33(1) and (2) PCT.

However, with respect to features of claim 1, D1 discloses a services management method (cf passages cited in search report) in which a service provider can manage his own services (a service provider can always manage his own services, eg access to them, which is the point of the method of D1), comprising the steps of:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/EP99/06176

assigning an access code to a subscriber by which the subscriber is allowed to get access to services via another network (column 6 lines 48 - 51 and column 6 line 57 - column 7 line 2);
encapsulating said access code into a data message (column 6 line 57 - column 7 line 2); and
transmitting said data message via a corresponding data channel of said network to a terminal of said subscriber (column 7 lines 1 - 6).

The remaining features of claim 1, namely that the subscriber can manage his own services and that the subscriber is allowed to get access to service management are optional (they are prefaced by an "or" in the claim) and are thus ignored in the above analysis.

The difference between D1 and claim 1 is thus that the method of claim 1 is "in an Intelligent Network (IN)". However, none of the remaining features of claim 1 require an IN and no features of an IN are found in the claim. Moreover, even at the current application's filing date it would have been obvious to the skilled man that most telephone networks are IN (in this respect it is further noted that claim 1 has no mention that the claimed method is essentially for a mobile network).

Accordingly, from the starting point of D1, the skilled man would arrive at the claimed subject matter without performing an inventive step. Claim 1 thus fails to meet the requirements of Articles 33(1) and (3) PCT with regard to inventive step.

Similar matter to the above is also known from D2 (see in particular passages cited in search report). Claim 1 is thus also not inventive over the teachings of this document.

- 3) Similar comments to the above apply to independent apparatus claim 7, which corresponds to method claim 1.

Independent claim 12 relates to a subscriber terminal essentially adapted to work with the device of claim 7. This is also known from figures 1 and 2 of D2.

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/EP99/06176

These claims are thus industrially applicable and novel within the meaning of the PCT, but also not inventive thus fail to meet the requirements of Articles 33(1) and (3) PCT.

- 4) That the access code is a password (claims 2 and 8) is known from D2 (page 1 lines 3 - 5).

Use of "a subscriber identification number" (claims 3 and 9) is obvious in the light of the prior art citations.

Use of SMS or USSD (claims 4, 5, 10 and 11) is known from D1 (paragraph 0021).

Detecting the access code in a terminal (claim 6) corresponds to apparatus claim 12 and is known from D2.

Whilst likewise novel and industrially applicable, none of these claims thus meets the requirements of Articles 33(1) and (3) PCT with respect to inventive step.

Concerning Point VII

- 1) In order to meet the requirements of Rule 5.1(a)(ii) PCT, at least the documents D1 and D2 should have been cited in the description and briefly discussed.
- 2) The description should have been brought into conformance with the newly filed claims (Rule 5.1(a)(iii) PCT).

PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

PCT

NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL PRELIMINARY EXAMINATION REPORT (PCT Rule 71.1)

To:

LESON, T.J.A.
TIEDTKE-BÜHLING-KINNE & PARTNER
TBK-Patent
Bavariaring 4
D-80336 München
ALLEMAGNE

RECEIVED
EINGEGANGEN

26. Okt. 2001

TBK - PATENT

Date of mailing
(day/month/year) 25.10.2001

Applicant's or agent's file reference
WO 24040

IMPORTANT NOTIFICATION

International application No.
PCT/EP99/06176

International filing date (day/month/year)
23/08/1999

Priority date (day/month/year)
23/08/1999

Applicant
NOKIA NETWORKS OY et al.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

Name and mailing address of the IPEA/



European Patent Office
D-80298 Munich
Tel. +49 89 2399 - 0 Tx: 523656 epmu d
Fax: +49 89 2399 - 4465

Authorized officer

Finnie, A

Tel. +49 89 2399-8251



PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference WO 24040	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/EP 99/ 06176	International filing date (day/month/year) 23/08/1999	(Earliest) Priority Date (day/month/year)
Applicant NOKIA NETWORKS OY		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 3 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the title,

☐ the text is approved as submitted by the applicant.

☒ the text has been established by this Authority to read as follows:

SENDING INITIAL PASSWORD THROUGH AN SMS

5. With regard to the abstract,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

☒ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

1

☐ None of the figures.

- 11 -

Claims

1. A services management method for managing subscriber
5 services, comprising the steps of:
 assigning (S1) an access code to a subscriber;
 encapsulating (S2) said access code into a data
message; and
 transmitting (S3) said data message via a
10 corresponding data channel of said network to a terminal
 (1) of said subscriber.
2. The services management method according to claim 1,
wherein said access code comprises a password.
- 15 3. The services management method according to claim 1
or 2, wherein said access code comprises a subscriber
identification number.
- 20 4. The services management method according to claim 1,
wherein said data message is a Short Message Service
(SMS) message.
5. The services management method according to claim 1,
25 wherein said data message is an Unstructured
Supplementary Service Data (USSD) message.
6. The services management method according to any one
of the previous claims, further comprising the step of
30 detecting (S5) said access code in said terminal of
said subscriber.
7. A services management device for managing subscriber
services, comprising:

RELEASED BY
ART 34 ANDT

an access granting means (61) for assigning an access code to a subscriber;

a message generating means (62) for encapsulating said access code into a data message; and

5 a transmitting means (63) for transmitting said data message via a corresponding data channel of said network to a terminal (1) of said subscriber.

8. The services management device according to claim 7,
10 wherein said access code comprises a password.

9. The services management method according to claim 7 or 8, wherein said access code comprises a subscriber identification number.

15

10. The services management device according to claim 7, wherein said data message is a Short Message Service (SMS) message.

20 11. The services management device according to claim 7, wherein said data message is an Unstructured Supplementary Service Data (USSD) message.

12. A subscriber terminal which is adapted to receive
25 data messages transmitted by a services management device according to any one of the claims 8 to 13, comprising a detecting means (11) for detecting said access code.

PCT REQUEST

Original (for SUBMISSION) - printed on 23.08.1999 11:52:49 AM

0 0-1	For receiving Office use only International Application No.	PCT/EP 9 9 / 0 6 1 7 6
0-2	International Filing Date	23 AUG 1999 (23. 08. 1999)
0-3	Name of receiving Office and "PCT International Application"	EUROPEAN PATENT OFFICE PCT INTERNATIONAL APPLICATION
0-4 0-4-1	Form - PCT/RO/101 PCT Request Prepared using	PCT-EASY Version 2.84 (updated 01.04.1999)
0-5	Petition The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty	
0-6	Receiving Office (specified by the applicant)	European Patent Office (EPO) (RO/EP)
0-7	Applicant's or agent's file reference	WO 24040
I	Title of invention	INITIAL PASSWORD SEND BY SMS
II II-1 II-2 II-4 II-5	Applicant This person is: Applicant for Name Address:	applicant only all designated States except US NOKIA TELECOMMUNICATIONS OY Keilalahdentie 4 FIN-02150 Espoo Finland
II-6	State of nationality	FI
II-7	State of residence	FI
II-8	Telephone No.	+358 9 1807 0
II-9	Facsimile No.	+358 9 1807 496
III-1 III-1-1 III-1-2 III-1-4 III-1-5	Applicant and/or inventor This person is: Applicant for Name (LAST, First) Address:	applicant and inventor US only ANDERSEN, Michael, Tulinius Huldborgs Allé 32 DK-2800 Lyngby Denmark
III-1-6	State of nationality	DK
III-1-7	State of residence	DK

PCT REQUEST

Original (for SUBMISSION) - printed on 23.08.1999 11:52:49 AM

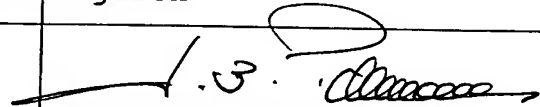
WO 24040

IV-1	Agent or common representative; or address for correspondence The person identified below is hereby/has been appointed to act on behalf of the applicant(s) before the competent International Authorities as:	agent
IV-1-1	Name (LAST, First)	PELLMANN, Hans-Bernd
IV-1-2	Address:	Tiedtke-Bühling-Kinne et al. Bavariaring 4 D-80336 München Germany
IV-1-3	Telephone No.	+49 89 544690
IV-1-4	Facsimile No.	+49 89 532611
IV-1-5	e-mail	postoffice tbk-patent:com
IV-2	Additional agent(s)	additional agent(s) with same address as first named agent
IV-2-1	Name(s)	TIEDTKE, Harro; BÜHLING, Gerhard; KINNE, Reinhard; GRAMS, Klaus; LINK, Annette; VOLLNHALS, Aurel; LESON, Thomas, Johannes, Alois; TRÖSCH, Hans-Ludwig; CHIVAROV, Georgi; GRILL, Matthias; KÜHN, Alexander; OSER, Andreas; BÖCKELEN, Rainer
V	Designation of States	
V-1	Regional Patent (other kinds of protection or treatment, if any, are specified between parentheses after the designation(s) concerned)	AP: GH GM KE LS MW SD SZ UG ZW and any other State which is a Contracting State of the Harare Protocol and of the PCT EA: AM AZ BY KG KZ MD RU TJ TM and any other State which is a Contracting State of the Eurasian Patent Convention and of the PCT EP: AT BE CH&LI CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE and any other State which is a Contracting State of the European Patent Convention and of the PCT OA: BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG and any other State which is a member State of OAPI and a Contracting State of the PCT
V-2	National Patent (other kinds of protection or treatment, if any, are specified between parentheses after the designation(s) concerned)	AE AL AM AT AU AZ BA BB BG BR BY CA CH&LI CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZA ZW

PCT REQUEST

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WO 24040

V-5	Precautionary Designation Statement In addition to the designations made under items V-1, V-2 and V-3, the applicant also makes under Rule 4.9(b) all designations which would be permitted under the PCT except any designation(s) of the State(s) indicated under item V-6 below. The applicant declares that those additional designations are subject to confirmation and that any designation which is not confirmed before the expiration of 15 months from the priority date is to be regarded as withdrawn by the applicant at the expiration of that time limit.		
V-6	Exclusion(s) from precautionary designations	NONE	
VI	Priority claim	NONE	
VII-1	International Searching Authority Chosen	European Patent Office (EPO) (ISA/EP)	
VIII	Check list	number of sheets	electronic file(s) attached
VIII-1	Request	4	-
VIII-2	Description	10	-
VIII-3	Claims	2	-
VIII-4	Abstract	1	wo24040a.txt
VIII-5	Drawings	2	-
VIII-7	TOTAL	19	
VIII-8	Accompanying items	paper document(s) attached	electronic file(s) attached
	Fee calculation sheet	✓	-
VIII-16	PCT-EASY diskette	-	diskette
VIII-18	Figure of the drawings which should accompany the abstract	1	
VIII-19	Language of filing of the international application	English	
IX-1	Signature of applicant or agent		
IX-1-1	Name (LAST, First)	PELLMANN, Hans-Bernd	

FOR RECEIVING OFFICE USE ONLY

10-1	Date of actual receipt of the purported international application	23 AUG 1999	(23. 08. 1999)
10-2	Drawings:	✓	
10-2-1	<u>Received</u>		
10-2-2	Not received		
10-3	Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application		
10-4	Date of timely receipt of the required corrections under PCT Article 11(2)		
10-5	International Searching Authority	ISA/EP	
10-6	Transmittal of search copy delayed until search fee is paid		

PCT REQUEST

4/4

Original (for SUBMISSION) - printed on 23.08.1999 11:52:49 AM

WO 24040

FOR INTERNATIONAL BUREAU USE ONLY

11-1	Date of receipt of the record copy by the International Bureau	23. 08. 99
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(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
1 March 2001 (01.03.2001)

PCT

(10) International Publication Number
WO 01/15462 A1

(51) International Patent Classification⁷: **H04Q 3/00, H04L 29/06, H04Q 7/22**

(21) International Application Number: **PCT/EP99/06176**

(22) International Filing Date: **23 August 1999 (23.08.1999)**

(25) Filing Language: **English**

(26) Publication Language: **English**

(71) Applicant (for all designated States except US): **NOKIA NETWORKS OY [FI/FI]; Keilalahdentie 4, FIN-02150 Espoo (FI).**

(72) Inventor; and

(75) Inventor/Applicant (for US only): **ANDERSEN, Michael, Tulinius [DK/DK]; Huldbergs Allé 32, DK-2800 Lyngby (DK).**

(74) Agents: **PELLMANN, Hans-Bernd et al.; Tiedtke-Bühling-Kinne et al., Bavariaring 4, D-80336 München (DE).**

(81) Designated States (national): **AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW.**

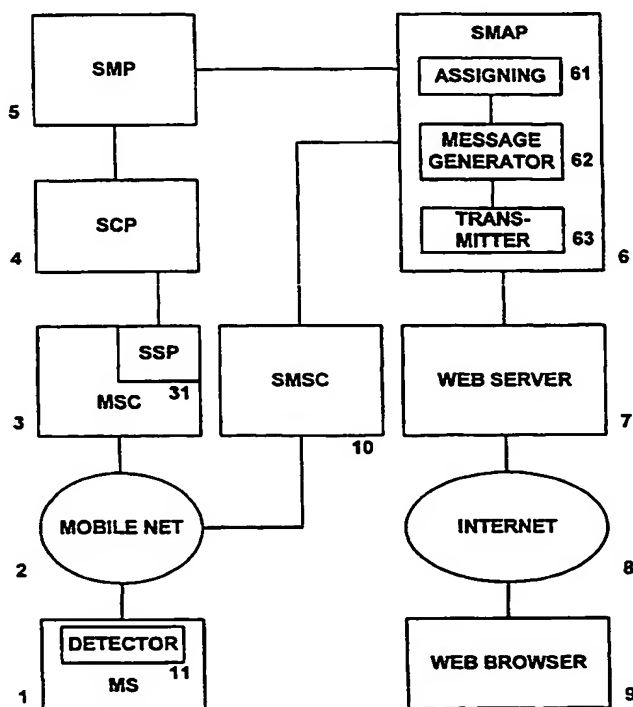
(84) Designated States (regional): **ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).**

Published:

— With international search report.

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **SENDING INITIAL PASSWORD THROUGH AN SMS**



(57) Abstract: The present invention discloses a services management method for managing subscriber services, comprising the steps of assigning an access code to a subscriber, encapsulating said access code into a data message, and transmitting said data message via a corresponding data channel of said network to a terminal (1) of said subscriber. By using this method, an access code like a password can be sent from a Service Management Access Point (SMAP) (6) to the terminal (1) of a subscriber via a data message such as a Short Message Service (SMS) message.

WO 01/15462 A1

2/pv

SENDING INITIAL PASSWORD THROUGH AN SMS

Field of the invention

5

The present invention relates to a services management method for managing subscriber services and to a corresponding device, which serve in particular to supply a subscriber of services of a network with a password.

10

BACKGROUND OF THE INVENTION

There are a plurality of networks which offer special services for subscribers. An example for such networks is the so-called Intelligent Network (IN). The term Intelligent Network describes a network, in which new services can easily be introduced without the need to replace or upgrade switches or network control devices, including those under customer control.

In such an Intelligent Network, a subscriber or service provider can manage his own services by a network user interface. This management is handled by a so called Service Management Access Point (SMAP).

SMAP is an access system which provides the customers and service providers an open interface to different telecommunication network elements. They can update by using SMAP their service data in a secure and controlled manner on self-service basis in an intelligent network or other telecommunication network. A more detailed description of SMAP can be found in Nokia's patent application WO 98/41038.

35

In general, the communications between the subscriber and the SMAP have been handled so far by an Interactive Voice Prompt (IVR). This unit serves to collect information from a subscriber by outputting of voice messages which
5 can be answered by the subscriber by operating keys or by predetermined spoken words.

The identification of the subscriber has been effected according to the Mobile Station Integrated Services
10 Digital Network Number (MSISDN). The MSISDN is a permanent subscriber data stored in a Service Management Point (SMP).

Especially in such a network including IN services it is
15 necessary to grant different access admissions to respective subscribers. That is, if a subscriber to IN services is given access to the SMAP over the network, he must be provided with a user identification (ID) and a password or some other kind of credential.

20 It is important to protect the service management by a password or the like since it has to be avoided that other parties than the subscriber can get access to secret data such as a phone bill or the like.

25 Furthermore, the service provider should be enabled to prove that the subscriber can only get access to those services for which he has paid for.

Heretofore, the password which has been assigned to the
30 corresponding subscriber has been sent to the subscriber by using paper mail, for example. This involves a lot of work for the staff of a service provider and/or network operator. Thus, it is very expensive to grant a huge number of passwords for a huge number of subscribers.

Therefore, the way of granting a password (or any other form or credential) according to this prior art as described above is complicated, troublesome and costly.

5

SUMMARY OF THE INVENTION

Thus, the object underlying the invention is to eliminate the above drawbacks of the prior art and to provide a
10 method and an apparatus by which a password or different kinds of security code can be supplied to a subscriber in an uncomplicated manner.

This object is solved by a services management method for
15 managing subscriber services, comprising the steps of assigning an access code to a subscriber, encapsulating the access code into a data message, and transmitting the data message via a corresponding data channel of the network to a terminal of the subscriber.

20

Furthermore, the above object is solved by a services management device for managing subscriber services, comprising an access granting means for assigning an access code to a subscriber, a message generating means
25 for encapsulating the access code into a data message, and a transmitting means for transmitting the data message via a corresponding data channel of the network to a terminal of the subscriber.

30 By the above method, the delivery of an access code such as a password is performed by using an existing kind of data messages, for example, a Short Message Service (SMS) message. The method according to the invention can easily be performed in a Service Management Access Point (SMAP)
35 without involving the staff of a IN service provider.

Thus, an uncomplicated handling regarding the provision of passwords to the subscribers is possible. Furthermore, it also very easy for the subscriber to use his password since it is sent to the mobile station which he uses for accessing the corresponding Intelligent Network.

Moreover, it is very easy to regularly change the password in order to provide a higher security when accessing the network. This is because new passwords can easily be sent by using the data channel. Sending passwords via paper mail during short intervals would be very complicated and troublesome for the staff of the IN services provider and also for the user.

Further advantageous developments are defined in the dependent claims.

BRIEF DESCRIPTION OF THE DRAWINGS

The present invention will be more readily understood with reference to the accompanying drawings in which:

Fig. 1 shows a structure of a network including Intelligent Network (IN) services according to an embodiment of the invention, and

Fig. 2 a flowchart of a process for delivering a password to a subscriber according to the embodiment of the invention.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

In the following, a preferred embodiment of the invention is described in more detail with reference to the
5 accompanying drawings.

Fig. 1 shows a structure of a general network system in which IN (Intelligent Network) services are provided. A user terminal which can be a mobile station (MS), for
10 example, is denoted with reference numeral 1. This mobile station is connected via a mobile network 2 with a Mobile Services Switching Center (MSC) 3.

The MSC 3 comprises a Service Switching Point (SSP) 31
15 which implements a service switching function and which also provides an interface between a Services Control Point (SCP) 4 and the MSC 3. The SCP 4 serves to control the services requests etc. and is the function in the telecommunications network, which has access to data and
20 logic for controlling processing of a call in order to provide a supplementary service. The SCP 4 is connected with a service management point (SMP) 5 in which IN services offered in the corresponding Intelligent Network are managed. In particular, also subscriber data such as
25 an MSISDN (Mobile Station ISDN Number, i.e., Mobile station Integrated Services Digital Network Number) are stored in the SMP 5.

Reference numeral 6 describes a Service Management Access
30 Point (SMAP) connected to the SMP 5. The SMAP 6 serves to control access from a subscriber to the SMP 5.

Reference numeral 7 denotes a web server of an IN service provider. The web server 7 provides an interface between

the subscriber terminal, i.e., a web browser 9 and the SMAP 6 via the Internet 8.

Reference numeral 10 denotes a Short Messages Service Center (SMSC) which controls the short messages and which provides a connection between the SMAP 6 and the MS 1 via the mobile network 2.

It is to be noted that for simplifying the description, all further elements necessary to establish the connection (e.g., base stations BS and base station controllers BSC) are omitted.

In general, when the subscriber grants access to the basic (call related) IN services, he does not have to provide a password. He is authenticated by the A-number (MSISDN). Only when services (or access to service management) are provided over another network (such as the Internet 8), another way to authenticate the subscriber has to be implemented.

That is, in order to get access to the IN services offered by the SMP to the subscriber via the Internet (by using his web browser 9), the subscriber must know his password and submit his password when requesting an IN service. Thus, initially, a password must be assigned to the subscriber and transmitted to the subscriber.

By using the password, the subscriber can establish a secure connection to the web-server 7 of the service provider. Furthermore, in case the security has been compromised (e.g., the password has become public), a new password can be issued.

It is to be noted that the password is only an example for an access code which is necessary for the subscriber to get access to the IN services. Such an access code can also include only a subscriber ID number or can include
5 an MSISDN number and the password. Furthermore, other forms of credential can be included in the access code.

According to this embodiment, the transmission of the password from the SMAP 6 to the subscriber is effected by
10 using a Short Message Service (SMS).

The Short Message Service (SMS) is a service which is implemented in almost all mobile stations. In general, SMS messages are utilized to communicate text data
15 between a serving Mobile Services Switching Center (MSC) and a mobile station (MS). SMS provides a high degree of privacy compared to, e.g., e-mails. Thus, SMS is an appropriate medium to transmit passwords or the like.

20 Using SMS messages, the serving center or any other connected node can transmit user information to the mobile station and have the mobile station store the received user information. The SMS messages are transmitted via a Short Message Service Center (SMSC).
25 Thus, the connection provided by the SMS is a data channel via which the data messages (SMS messages) containing the password are transmitted.

In the following, the elements necessary for the initial
30 transmission of the password are described in more detail.

The SMAP 6 comprises an assigning means 61 which assigns a password to a subscriber. For example, this can be
35 effected in response to a request for granting a password

from the corresponding subscriber. As an alternative, the passwords for access to service management can also be given in a bulk to the subscribers. However, this can also be effected during predetermined intervals (e.g.,
5 once a week) such that the password is changed regularly in order to improve the security of the access of the subscriber.

The assigned password is supplied to a message generator
10 62. This message generator 62 is adapted to encapsulate the password into an SMS message.

The SMS message containing the password is then supplied to a transmitter 63. The transmitter 63 is adapted to
15 transmit SMS messages via the Short Message Service Center (SMSC) 10. The SMSC 10 provides a connection between the SMAP 2 and the mobile station (MS) 1 of the subscriber via the mobile network 2. The MS 1 comprises a detector 11 which is adapted to receive the SMS message.
20

The method for transmitting the password performed in the above described devices is shown in the flowchart of Fig. 2.

25 Steps S1 to S3 are performed on the IN service management side (i.e., in the SMAP 6), whereas steps S4 to S5 are performed on the subscriber side (i.e., in the mobile station MS 1).

30 In step S1, the password is assigned to a subscriber. In step S2, the password is encapsulated in an SMS message. Then, the SMS message is transmitted to the mobile station via an SMS connection (SMS data channel), i.e., via the SMSC 10 and the mobile network 2.
35

In step S4, the SMS message is received by the mobile station. In step S5, the password is detected in the SMS message and shown on a display of the mobile station. Preferably, the password should not be automatically
5 displayed but on demand of the subscriber, for example by operating a special key or inputting a special code for reading SMS messages. This measure avoids that other persons than the subscriber can accidentally read the password.

10

The above embodiment has been described such that the password is sent by using an SMS message. As an alternative of this embodiment, the password can also be transmitted by a so-called Unstructured Supplementary
15 Service Data (USSD) message.

In general, using USSD messages, a mobile telecommunication network is able to transparently communicate text data with a mobile station. Hence, the
20 mobile station may receive and display text messages on an attached display unit.

Thus, USSD messages are similar to SMS messages with respect to the capability of sending text data to a
25 subscriber. Hence, also USSD messages can be used to transmit a password to the corresponding subscriber.

In case of using USSD messages instead of SMS messages, the message generator 62 and the transmitter 63 of the
30 SMAP 6 and the SMSC 10 have to be correspondingly modified. In particular, the USSD message has to be transmitted via a USSD data channel.

It is to be noted that the above embodiment has been
35 described with respect to a mobile telecommunication

network (e.g., a GSM network). However, the invention can also be applied to fixed networks as long as the terminals are adapted to receive data messages such as SMS or USSD messages.

5

As described above, by using the method according to the invention, an access code like a password can be transmitted from a Service Management Access Point SMAP 2 to the terminal 4 of a subscriber via a data message such as a Short Message Service SMS message. Thus, a necessary password can easily be supplied to the subscriber without the need of complicated work of a staff of an IN service provider or the like. Furthermore, the method can easily be implemented, since almost all mobile stations support Short Message Service (SMS).

10
15

The above description and accompanying drawings only illustrate the present invention by way of example. Thus, the embodiments of the invention may vary within the scope of the attached claims.

20

Claims

1. A services management method for managing subscriber
5 services, comprising the steps of:
 assigning (S1) an access code to a subscriber;
 encapsulating (S2) said access code into a data
 message; and
 transmitting (S3) said data message via a
10 corresponding data channel of said network to a terminal
 (1) of said subscriber.
2. The services management method according to claim 1,
 wherein said access code comprises a password.
15
3. The services management method according to claim 1
 or 2, wherein said access code comprises a subscriber
 identification number.
- 20 4. The services management method according to claim 1,
 wherein said data message is a Short Message Service
 (SMS) message.
5. The services management method according to claim 1,
25 wherein said data message is an Unstructured
 Supplementary Service Data (USSD) message.
6. The services management method according to any one
 of the previous claims, further comprising the step of
30 detecting (S5) said access code in said terminal of
 said subscriber.
7. A services management device for managing subscriber
 services, comprising:

an access granting means (61) for assigning an access code to a subscriber;

a message generating means (62) for encapsulating said access code into a data message; and

5 a transmitting means (63) for transmitting said data message via a corresponding data channel of said network to a terminal (1) of said subscriber.

8. The services management device according to claim 7,
10 wherein said access code comprises a password.

9. The services management method according to claim 7 or 8, wherein said access code comprises a subscriber identification number.

15 10. The services management device according to claim 7, wherein said data message is a Short Message Service (SMS) message.

20 11. The services management device according to claim 7, wherein said data message is an Unstructured Supplementary Service Data (USSD) message.

12. A subscriber terminal which is adapted to receive
25 data messages transmitted by a services management device according to any one of the claims 8 to 13, comprising a detecting means (11) for detecting said access code.

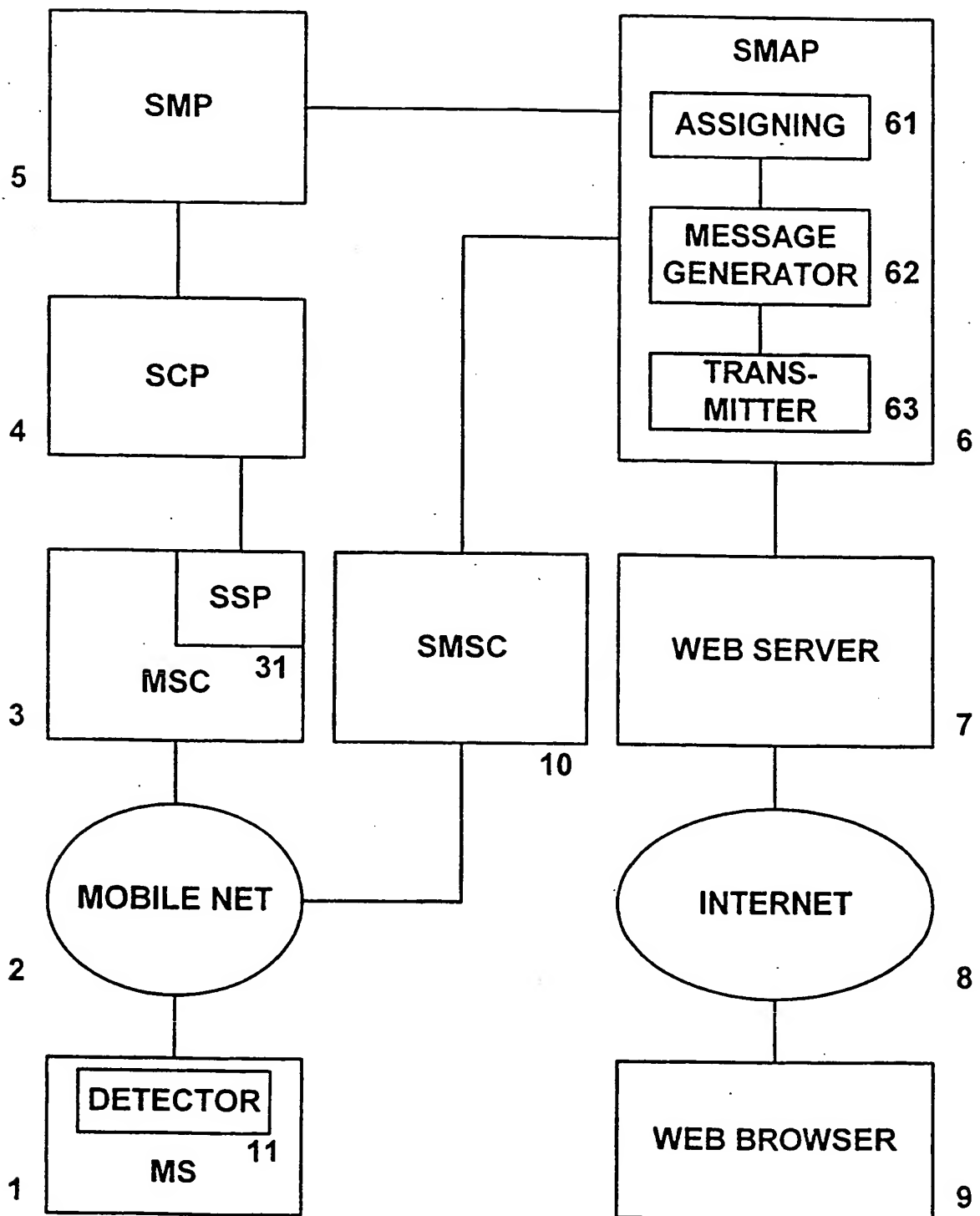
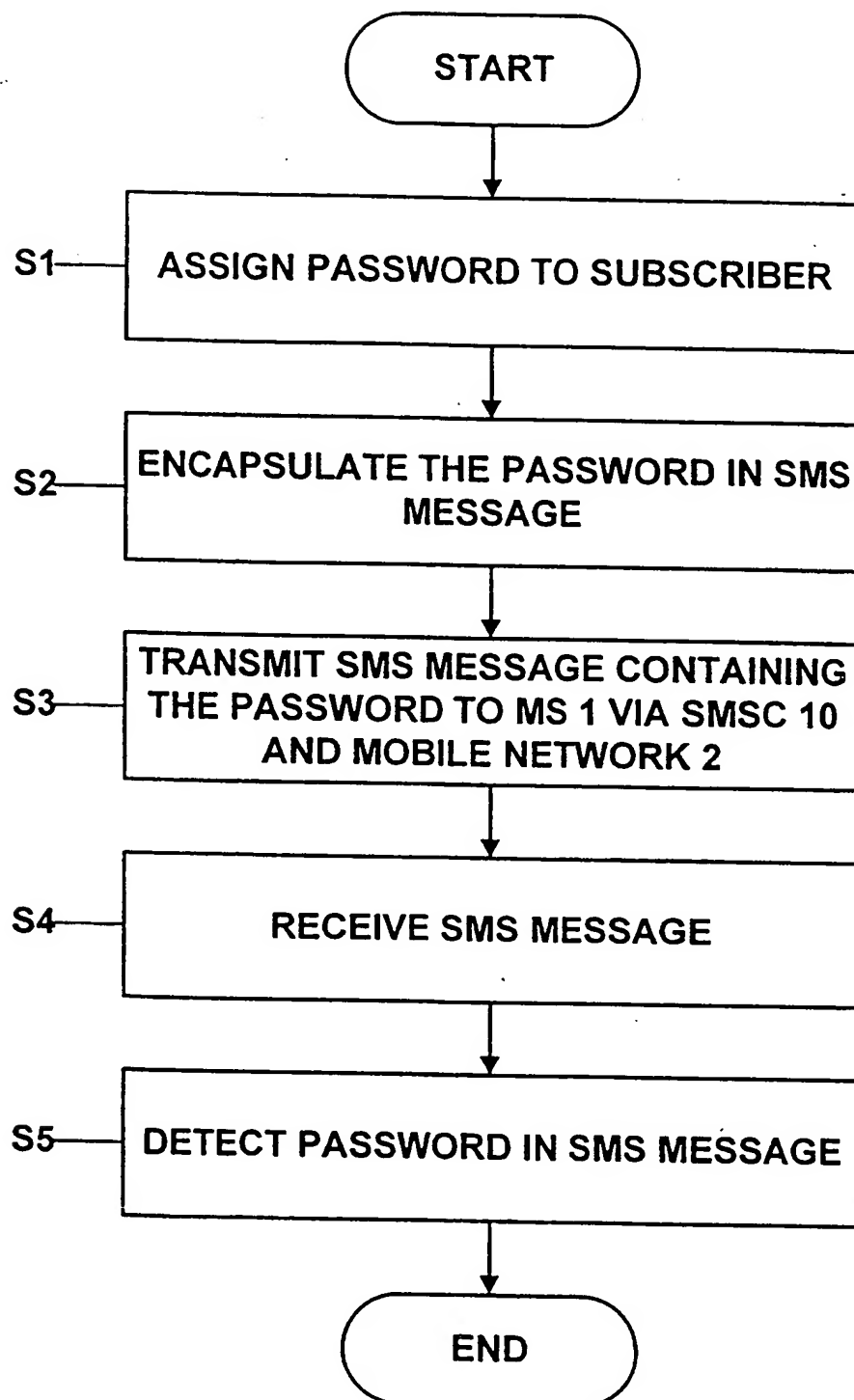


FIG. 1

**FIG. 2**

INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 99/06176

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H04Q3/00 H04L29/06 H04Q7/22

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H04Q H04L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P, X	EP 0 944 203 A (NOKIA MOBILE PHONES LTD) 22 September 1999 (1999-09-22) abstract paragraph '0021! paragraph '0030! & FI 980 291 A (NOKIA MOBILE PHONES LTD) 10 August 1999 (1999-08-10)	1-12
X	WO 97 31306 A (NOKIA MOBILE PHONES LTD) 28 August 1997 (1997-08-28) abstract page 1, line 3 - line 5 page 1, line 30 - page 3, line 5 page 4, line 18 - line 28 page 5, line 33 - page 7, line 7 -/-	1-4, 7-10

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"Z" document member of the same patent family

Date of the actual completion of the international search

29 March 2000

Date of mailing of the international search report

10/04/2000

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax (+31-70) 340-3018

Authorized officer

Larcinese, C

INTERNATIONAL SEARCH REPORT

Internat'l Application No

PCT/EP 99/06176

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 851 696 A (AT&T WIRELESS SERVICES, INC.) 1 July 1998 (1998-07-01) abstract column 1, line 34 -column 2, line 28 column 3, line 8 -column 4, line 14	1,3,4,7, 9,10
A	US 5 577 103 A (FOTI) 19 November 1996 (1996-11-19) abstract column 2, line 53 - line 67 column 3, line 19 - line 44	1-12

INTERNATIONAL SEARCH REPORT

Information on patent family members

Internat'l Application No

PCT/EP 99/06176

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
EP 944203	A	22-09-1999	FI	980291 A	10-08-1999
WO 9731306	A	28-08-1997	FI	960820 A	24-08-1997
			AU	1604497 A	10-09-1997
			EP	0976015 A	02-02-2000
EP 851696	A	01-07-1998	BR	9706412 A	25-05-1999
			CA	2221666 A	24-06-1998
			JP	10200966 A	31-07-1998
			NO	975935 A	25-06-1998
US 5577103	A	19-11-1996	AU	5017496 A	02-10-1996
			WO	9628945 A	19-09-1996

TBK

TIEDTKE - BÜHLING - KINNE PARTNER (GmbH)

10/049591

IC13 Rec'd PCT/PTO 13 FEB 2002



TBK-Patent POB 20 19 18 80019 München

Patentanwälte

Dipl.-Ing. Harro Tiedtke
Dipl.-Ing. Reinhard Kinne
Dipl.-Ing. Hans-Bernd Pellmann
Dipl.-Ing. Klaus Grams
Dipl.-Ing. Aurel Vollnhals
Dipl.-Ing. Thomas J.A. Leson
Dipl.-Ing. Dr. Georgi Chivarov
Dipl.-Ing. Matthias Grill
Dipl.-Ing. Hans-Ludwig Trösch
Dipl.-Ing. Alexander Kühn
Dipl.-Ing. Rainer Böckelen
Dipl.-Ing. Stefan Klingele
Dipl.-Chem. Stefan Bühlung
Dipl.-Ing. Ronald Roth

An das
Europäische Patentamt

80298 München

October 5, 2001

PCT Patent Application No.: PCT/EP 99/06176

NOKIA NETWORKS OY

Our ref.: WO 24040

(F:5.10.01, Eing.)

Reference is made to the Written Opinion pursuant to Rule 66 PCT dated July 5, 2001.

Enclosed new claims 1 to 12 replacing the original claims 1 to 12 are filed, upon which the further prosecution of the application is to be based.

It is intended to effect necessary amendments to the description in the regional/national phase.

The new independent claim 1 is based on the original independent claim 1. The new independent claim 7 is based on the original independent claim 7. The additional feature in the independent claims regarding the function of the Intelligent Network is disclosed on page 5, lines 7 to 8 (in connection with page 1, lines 22 to 25), for example. The additional feature regarding the access of the subscriber via another network is disclosed on page 6, lines 17 to line 27, for example.

The claims 2 to 6 and 8 to 12 are identical to the original claims 2 to 6 and 8 to 12, respectively.

Dresdner Bank München Kto. 3939 844 BLZ 700 800 00
Deutsche Bank München Kto. 286 1060 BLZ 700 700 10
Postbank München Kto. 67043 804 BLZ 700 100 80
Dai-ichi-Kangyo Bank München Kto. 8104233007 BLZ 300 207 00
Sanwa Bank Düsseldorf Kto. 500 047 BLZ 301 307 00

Telefon: +49 89 544690
Telefax (G3): +49 89 532611
Telefax (G3+G4): +49 89 5329095
E-Mail: postoffice@tbk-patent.de
Internet: <http://www.tbk-patent.de>
Bavariaring 4-6, 80336 München

The new independent claims 1 and 7 are formulated in the one-part form since it is believed that a two-part form would lead to a complicated claim wording.

As described in detail in the introductory part of the present application, the object underlying the present invention is to provide a method and a device by which in an Intelligent Network (IN) a kind of a access code (e.g., password) can be supplied to a subscriber in an uncomplicated manner.

This object is solved by a services management method as set out in the new independent claim 1, and alternatively by a services management device as set out in the new independent claim 7.

In detail, in an Intelligent Network, the access code by which the subscriber is allowed to get access to services or to service management via another network is sent by a messaging service like SMS to the subscriber.

Hence, according to the present invention, an easy handling of the access codes is provided.

Document EP-A-0 944 203 (document D1) is post-published, and also the priority document FI 980291 was published after the filing date of the present application. Therefore, this document is only relevant with respect to novelty.

In this respect, it is noted that document D1 does not describe an Intelligent Network. Hence, the subject-matter of the new independent claims 1 and 7 is novel over document D1.

Moreover, also the remaining cited prior art documents do not describe transmitting of access codes in an Intelligent Network.

Therefore, the subject-matter of the new independent claims 1 and 7 is new.

However, it also involves the required inventive step.

Document WO 97 31306 A (document D2) discloses a method, by which user specific data is transmitted by using SMS. However, a person skilled in the art would not refer to this document when looking for a solution for the object underlying the present invention.

Namely, in document D2, the whole environment is completely different. In particular, only conventional mobile networks are concerned and not an Intelligent Network. The situation in an Intelligent Network, however, is completely different from that in a conventional network like a normal GSM network. That is, a person skilled in the art would not refer to the cited prior art document D2.

In detail, as described on page 2 of the present application in detail, in an Intelligent Network, there are already permanent subscriber data stored in a Service Management Point (SMP). Therefore, a person skilled in the art would use these data when looking for a solution underlying the present invention. That is, there is no reason why he should not use this data to grant access to a service.

Thus, since he would not refer to document D2, a person skilled in the art could not get any suggestions from document D2 which would lead him to the subject-matter of

the new independent claims 1 and 7 without involving an inventive activity.

Thus, it is respectfully submitted that the new independent claims 1 and 7 show a patentable subject-matter.

The International Preliminary Examination Authority is therefore respectfully invited to reconsider its opinion on the patentability of the claimed subject matter in the light of the arguments as presented herein above prior to establishing the (final) International Preliminary Examination Report.

Thomas J.A. Leson
Patentanwalt
TBK-Patent

Enclosure:
- New claims 1 to 12

Enclosure of October 5, 2001

PCT Patent Application No.: PCT/EP 99/06176
NOKIA NETWORKS OY
Our ref.: WO 24040

New claims 1 to 12

1. A services management method for managing subscriber services in an Intelligent Network, in which a subscriber or service provider can manage his own services, comprising the steps of:

5 assigning (S1) an access code to a subscriber by which the subscriber is allowed to get access to services or to service management via another network (8);

 encapsulating (S2) said access code into a data message; and

10 transmitting (S3) said data message via a corresponding data channel of said network to a terminal (1) of said subscriber.

2. The services management method according to claim 1,
15 wherein said access code comprises a password.

3. The services management method according to claim 1 or 2, wherein said access code comprises a subscriber identification number.

20

4. The services management method according to claim 1, wherein said data message is a Short Message Service (SMS) message.

5. The services management method according to claim 1, wherein said data message is an Unstructured Supplementary Service Data (USSD) message.

5 6. The services management method according to any one of the previous claims, further comprising the step of detecting (S5) said access code in said terminal of said subscriber.

10 7. A services management device for managing subscriber services in an Intelligent Network in which a subscriber or service provider can manage his own services, comprising:

an access granting means (61) for assigning an
15 access code to a subscriber by which the subscriber is allowed to get access to services or to service management via another network (8);

a message generating means (62) for encapsulating said access code into a data message; and

20 a transmitting means (63) for transmitting said data message via a corresponding data channel of said network to a terminal (1) of said subscriber.

8. The services management device according to claim 7,
25 wherein said access code comprises a password.

9. The services management method according to claim 7 or 8, wherein said access code comprises a subscriber identification number.

30

10. The services management device according to claim 7, wherein said data message is a Short Message Service (SMS) message.

11. The services management device according to claim 7, wherein said data message is an Unstructured Supplementary Service Data (USSD) message.

- 5 12. A subscriber terminal which is adapted to receive data messages transmitted by a services management device according to any one of the claims 8 to 11, comprising a detecting means (11) for detecting said access code.